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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,431	09/17/2004	Wai Ling Chung-Maloney	BUR920040128US1	5430
46170	7590	07/07/2006	EXAMINER	
WHITHAM, CURTIS & CHRISTOFFERSON, P.C. 11491 SUNSET HILLS ROAD, SUITE 340 RESTON, VA 20190			DO, THUAN V	
			ART UNIT	PAPER NUMBER
			2825	

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/711,431	CHUNG-MALONEY ET AL.	
	Examiner	Art Unit	
	Thuan Do	2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is responsive to elected restriction dated on 06/09/2006. Claims 6-14 are pending in this office action. Claims 1-5 are the non-elected ones and requested to be cancel in the next response.

Applicant's representative elected group 2, claims 6-14 with traverse. Since the application contains claims directed to the following patentably distinct species of the claimed invention:

Group I, claims 1-5 draw to selecting a smallest chip image from among a plurality of chip images that can supply at least a required number of I/O cells; determining a number of excess I/O kernels of said smallest chip image in excess of said required number of I/O cells; computing a number of other cells types which can be provided by the core area of the image and the area of the excess I/O kernels; and evaluating from a result of said computing step if a required number of cells for said integrated circuit design can be provided within said smallest chip image if said excess I/O cells or I/O kernels are depopulated from said smallest chip image.

Group II, claims 6-14 draw to an array of I/O kernels, each I/O kernel having a plurality of contiguous I/O cells having common power connections, independent of any other I/O kernel; and a plurality of contiguous depopulated I/O cell sites corresponding to an area of a said I/O kernel and having core cells formed therein.

The distinction between two groups is the search of group II that does not require the different elements of group I such as selecting a smallest chip image, determining a number of excess I/O kernels, computing a number of other cells types and evaluating from a result. Therefore, these invention are distinct and the restriction for examination purposes as indicated is proper.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48 (b) if one

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or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(h).

Claim objections

Claim 6, the term "independent of any other I/O kernel";

Claim 14, the term "I/O cell sites associated with a contiguous plurality of other of said connection pads" are unclear to what applicants intend to mean.

Clarification or correction is required.

Claim Rejections - 35 USC 112

2. Claim 6 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "independent" function, does not reasonably provide enablement for "independent of any other I/O kernel". The specification does not enable any person skilled in the art to which it pertains. Examiner does not know how to make the "independent" function to the other I/O cells.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 6-11,13,14 are rejected under 35 U.S.C. 101 and unpatentable because the claimed invention is directed to non-statutory subject matter. The claimed invention lacks patentable utility.

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The claims appear to use abstract functions or definitions without providing a useful, concrete and tangible result.

The clarification of claim descriptions for the patentable utilities is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claims 6-14 are rejected under 35 U.S.C. 102(e) as being unpatentable over the prior art of Ali et al. , Pat. No. 6836026.

Regarding claim 1: The prior art teaches a circuit comprising:

an array of I/O kernels, each I/O kernel having a plurality of contiguous I/O cells having common power connections, independent of any other I/O kernel (col. 7, lines 38-58); and

a plurality of contiguous depopulated I/O cell sites corresponding to an area of a said I/O kernel and having core cells formed therein (col. 3, lines 21-35 and col. 9, lines 25-38 using cell replacement).

Regarding claims 7,8: The prior art teaches a circuit with connection pads (col. 9, lines 25-38).

The remaining claims of 102(e) section contain features similar to the rejection of above claims and rejected in the rationale.

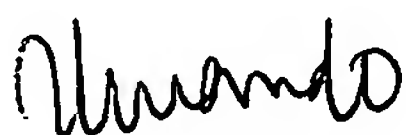
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CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan Do whose telephone number is 571-272-1891. The examiner can normally be reached on Monday-Friday 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on 571-272-7483. The fax phone numbers for proceeding this application is 571 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 800-786-9199.



Thuan Do
Primary examiner
06/30/2006